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100. *Hylocichla fuscescens salicicola*. Willow Thrush. Occurs sparingly in dense willow thickets in large open meadows. Noted at the outlet of Beaver Creek Canyon, June 25, and at Camas Meadows, July 16.

101. *Hylocichla guttata auduboni*. Audubon Hermit Thrush. Fairly common in willow thickets near heads of canyons. Noted at head of Little Dry Creek Canyon, June 18.

102. *Planesticus migratorius propinquus*. Western Robin. Common throughout the county, nesting in trees and bushes in the vicinity of ranch buildings, and in thickets along mountain streams. A nest with three eggs was found in a service-berry bush along Little Dry Creek, June 11; one with four eggs on a limb near the base of a cottonwood tree at the Burnside ranch, June 14.

103. *Sialia currucoides*. Mountain Bluebird. Occurs sparingly along foothills and in open canyons throughout the county. A nest containing three young able to fly was found in a hole in a fence post on the Burnside ranch, June 28.

Coeur d'Alene, Idaho, January 20, 1917.

SOME NOTES ON THE EFFECTS UPON BIRD LIFE, OF THE CORPUS CHRISTI STORM OF AUGUST 18, 1916

By R. A. SELL

BIRDS are governed by instinct. Their actions are so dependent upon instinctive tendencies that they are often unable to meet with success new and strange conditions. But is there any animal that does the best thing possible in a real emergency? How do horses and dogs behave at fires? Recall the peculiar things men and women do during storms and earth-quakes!

It seems to be the nature of birds to lose self-control quickly in emergency; yet there are some instances in which birds have been seen to act on the spur of the moment with such an insight and directness as could only be expected from animals that are rated much higher in the scale of intelligence. While the panic of a chicken flying and squawking along in front of a team of horses rather than turning to one side is proverbial, there are many instances of the same kind of fowls defending their young with tact and courage, besides the innumerable instances of wild birds staying with their nests or dropping into the water during fires.

Corpus Christi Bay is separated from the Gulf of Mexico by a chain of narrow sand-spits, and the passes connecting the two bodies of water are so shallow that it is necessary to keep a dredge at work continually in order to keep a channel open for the small boats that ply along the coast. Bird Island is a narrow sandy island so named because so many birds nest there that literally acres of eggs are to be found there during the laying season.

At Rockport there is a double row of posts, nearly a mile long, the remains of an old pier, and this was a favorite resort for pelicans. One observer reports seeing the entire line occupied by pelicans, a pelican to a post; in other words a double line of pelicans almost a mile long. At times these ungainly birds could be seen swinging themselves through the air and then awkwardly plunging down into the water only to flop out again with the fish, for they seldom miss.

The first indication of the storm here of interest was a stiff north wind and an ashen sky. There was no calm immediately preceding the storm, but

there was something ominous and threatening about that steady breeze. A long time before people became uneasy the birds seemed convinced that a storm was coming. The gulls and terns flew high and circled screaming along the beach; the great cranes flew from one side of the bay to the other; while the herons, curlews and killdeers kept flying short distances and lighting only to fly again first in one direction and then in another.

The storm struck the coast from a northwesterly direction and blew with such a uniform force that the water was driven away from Rockport. Many fish were left floundering on the sandy bottom, and some courageous people went out and gathered what they wanted of the choicest speckled trout, red fish, sheep-head, red snappers, etc. But the pelicans showed no desire to fish. They flew about in wild confusion first to the shores, then across the foaming waves into the very teeth of the storm. When there were literally miles of bare beach where there had always been water, the birds became even more panic stricken than they were before. Sometimes they would huddle together on the beach, but only for a minute. Then with piercing shrieks they would scatter, some waddling or half-flying up and down the beach, others trying to fly against the wind, while some even braved the foaming waves.

As the storm increased, the pelicans were simply blown about like the materials from a refreshment stand when boxes of rolled oats and packages of Uneda biscuits chased one another towards the water. When thoroughly exhausted a pelican would sometimes spread itself out and lie flat on the sand with its head towards the wind. While those on the shore were buffeted about at a terrible rate, those in the water fared even worse. The waves rolled so fast and with such irresistible force that the great birds, which are ordinarily so sure of themselves in the water, were almost helpless. When by an extreme effort one of them would succeed in raising its body above the waves it was likely to be turned over and over by the furious gale and shot into the crest of a foaming wave.

When the wind changed so that the water was driven back towards the shore with a rush, all of the pelicans on the shore began screaming, and it was these extreme penetrating cries from the pelicans and the gulls that were being driven ahead of the gale, that drew the attention of the people to the coming wall of water. All of the pelicans began to run and flutter towards the higher ground, but the fearful rolling, foaming waves caught and swallowed them in less time than it takes to tell it. Not one was left on the shore. Some of them could be seen for a time riding the terrible billows. Others were simply floating; no doubt many of them were dead.

The screaming of the gulls and the roar of the wind and waves was intense. Just how the gulls were able to drift ahead of the storm so long and keep from being dashed into the waves is hard to determine, but being lighter and able to take wing more easily than the pelicans they seemed to glance across the waves and meet the air again without entirely losing control. Thus they escaped being rolled into the waves, which were dashed together with great force and which caused such terrible destruction to the pelicans. After the first dash, when the water rolled high upon the beach, the gulls began to roll, partly flying, walking and being blow along, towards the higher ground. As they reached comparatively high spots they veered about with their heads towards the water and moved inland by a peculiar backing movement. Drawing the wings together and raising the hind part of the body a gull would hold

its head to the ground and seemingly jump straight up in order that the wind might carry it a few feet inland. In most instances the head would drag on the ground something like an anchor, and after accepting such a boost the gull would let its body fall down flat. In case it lost its balance and was taken up by the wind and turned over, it would draw up its legs and contract its wings so that when it hit the sand it would roll over and over. In this way many of them worked their way far enough inland to avoid the terrible crash of the debris that was brought in by the waves after the first set had reached the shore and the water had risen to a point somewhat above high tide.

As the foaming waves began to deposit the wrecks of bath houses, piers and pavilions along the beach, many water birds of various kinds could be seen in the wreckage. Some of them were alive; though it seems impossible, several gulls and terns fluttered out of the drifts and escaped to the shore. The waves pounded the drifts with such force that if a bird did not escape as soon as it came in, there was no hope for it, since it would surely be crushed between timbers.

The next morning great drifts of tangled masses of what had been trim-limbed cranes and pouch-mouthed pelicans could be seen. A few cripples were found: two great gray pelicans, one with his leg broken just above the knee and the other with a broken wing; three terns with broken wings, one of them having both wings broken; and five gulls with broken wings. One very large crane having one wing and one leg broken was still ready to defend himself with a spirit that deserved admiration.

A man who was marooned on one of the low islands which was swept by waves, climbed the largest tree on the island, a mere bush, and as he was waiting, he knew not what for, he saw a crane nestling behind a large rock that protruded above the water. Although he was not an ornithologist, a feeling of sympathy was aroused, and he watched with much concern as the water became higher and raised the crane above the rock.

"Old fellow I hope we'll both pull through," he said as he took a fresh hold with his numb hands. But the winds continued and the water kept rising. He had to draw his legs up to keep his feet out of the water. "I guess we'll go pretty soon. Well here's to you. You understand the game better than I do." The crane was on top of the rock now, but it was keeping its body as near the surface of the water as possible. A flock of gulls was driven past and their screams could be heard above the roar of the waves. The crane strained himself as if ready to try the waves. Then with an eager turn of the head from side to side he plunged into the water and allowed himself to drift before the storm. "Good-bye, old fellow." The next morning when a boat came to the rescue, one of the first things the man asked was, "I wonder how that old crane made out!"

No one witnessed the destruction of the gallinules. A large colony of these birds was completely exterminated. Their portion of the island was completely swept by water, and the next afternoon many of them drifted to shore just above the city of Corpus Christi. With these birds that drifted in were several eggs floating unbroken in the salt water. Why could not a Purple Gallinule, that graceful, trim-built, active, fish-eating bird take care of itself in a storm as well as a sea-gull? An expert diver and an excellent swimmer should be able to float. While a few live pelicans could be found after the storm, nobody reported seeing a live Purple Gallinule for several days.

On one of the drifts that contained thirty-one dead cattle besides the bodies of two hundred and fifteen birds of various kinds, there stood a solitary Scarlet Ibis. Like a garnet in the sands, or a rosy promise of the morning sun, it stood, gracefully poised above the terrible ruin—an encouragement, an inspiration, an unfailing hope—not as the rainbow suggesting the possibility of another destructive force, but as an animated symbol that life is immortal.

Houston, Texas, December 28, 1916.

BIRDS OF THE HUMID COAST

By FLORENCE MERRIAM BAILEY

(Continued from page 13)

III. THE CENTER OF A COMPRESSED NESTING AREA

There was so little cleared land that in a radius of fifty rods, including a few cleared acres and half lumbered woods, there was a compressed nesting area including a large variety of species. So well tenanted were the carpenter's acres that we could study ornithology indoors. Through the open windows the cheerful song of the California Purple Finch was sometimes heard at breakfast, a loud rapid round that added brightness and vivacity to the general medley of Sparrows, Vireos, Warblers, Wrens, and Robins, but was too bright and vivacious to accord with the sublimated songs of the Olive-sided Flycatchers, Nuttall Sparrows, and Varied Thrushes. While the round of the Purple Finch was occasionally heard, the song that came in through the windows from daybreak until dark was that of the Russet-backed Thrush, a song that, while it lacks the rare spirituality and deep serenity of that of the Hermit Thrushes, is so gentle, sweet, and musical that it seems fitted to harmonize all discords, avian or human. In the dusky margins of the days about the middle of June the voices of a family of Screech Owls were added to those of the song birds heard through the open windows.

From the sitting-room window we looked out on a charred spruce stub full of big holes dug out by the Pileated Woodpecker, and one day when I was away, one pounded there for twenty minutes, as the carpenter's wife reported. Not long after, I was called excitedly from my room with the good news, "He's there now!" And there he was, great Cock-of-the-Woods, second only to the still rarer Ivory-billed, with large black body, glowing red crest, and white neck stripe; lordly bird, the unusual sight of whom thrills the bird lover in heavily wooded regions from Maine to Oregon, making himself at home just outside our sitting room window! As he worked, someone coming up the trail startled him and, alas, away he flew out of sight. Several times later I heard the stirring *chuck, chuck*, in the woods, and one morning the sound of muffled blows in dead wood was followed by the *chuck-ah, chuck-chuck-chuck*, and as I crept silently down a trail in the dense protecting shadow of the timber the dull pounding stopped me and through an opening in the trees I discovered one of the splendid birds on a finger of broken branch in a niche, sunning and pluming itself. As if for an audience it spread one wing wide in the sun, tipping it